IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method for reducing latencies associated with accessing memory for more than one processors, each coupled with an associated private cache, the method comprising:

determining cache miss rates of the more than one processors when issuing cache requests against one or more private caches, wherein the processors and the private caches are parts of a single processor module;

comparing the cache miss rates of the more than one processors; and

allocating cache lines from a first private cache associated with a first processor to a second processor based upon the difference between the cache miss rate for the first processor and the cache miss rate of the second processor, wherein a latency to access the allocated lines of the first private cache by the second processor is greater than a latency to access cache lines of a second private cache associated with the second processor, and wherein the first private cache and the second private cache are at a same cache level.

2. (Original) The method of claim 1, wherein determining the cache miss rates comprises counting cache misses of each of the more than one processors.

3. (Previously Presented) The method of claim 1, wherein allocating cache lines comprises forwarding cache requests from the first processor to the second private cache associated with the second processor.

4. (Previously Presented) The method of claim 1, wherein allocating cache lines comprises selectively allocating cache lines based upon a priority associated with a cache request of the first processor.

5. (Currently Amended) A method for reducing cache miss rates for more than one processors, wherein the more than one processors couple with private caches, the method comprising:

monitoring the cache miss rates of the more than one processors, wherein the processors and the private caches are parts of a single processor module;

comparing the cache miss rates of the more than one processors to determine when a cache miss rate of a first processor associated with a first private cache of the private caches exceeds a threshold cache miss rate for the more than one processors;

forwarding a cache request associated with the first processor to a second private cache of the private caches in response to determining the cache miss rate exceeds the threshold cache miss rate;

replacing a cache line in the second private cache with a memory line received in response to the cache request; and

accessing the cache line in response to an instruction from the first processor, wherein a latency to access the cache line of the second private cache by the first processor is greater than a latency to access cache lines of the first private cache associated with the first processor, and wherein the first private cache and the second private cache are at a same cache level.

6. (Previously Presented) The method of claim 5, wherein monitoring the cache miss rates comprises not counting cache misses during a cold start, warm-up period.

7. (Previously Presented) The method of claim 5, wherein the cache miss rates are associated with more than one processor modules.

8. (Original) The method of claim 5, wherein the threshold cache miss rate is based upon an average cache miss rate for the more than one processors.

9. (Original) The method of claim 5, wherein forwarding the cache request comprises selecting the second private cache based upon a least recently used cache line associated with the private caches.

10. (Original) The method of claim 9, wherein selecting the second private cache comprises selecting a least recently used cache line based upon a processor module on which the first processor resides.

11. (Original) The method of claim 5, wherein forwarding the cache request comprises selecting the cache request based upon a priority associated with the cache request.

12. (Original) The method of claim 5, wherein forwarding the cache request is responsive to a software instruction that overrides a result of comparing the cache miss rates to forward the cache request to the second private cache.

13-42. (Cancelled)

Please add the following new claims:

43. (New) An apparatus for reducing cache miss rates for a plurality of processors coupled with respective private caches, wherein the plurality of processors and the respective private caches are parts of a single processor module, the apparatus comprising:

a cache miss rate monitor configured to determine the cache miss rates of the plurality of processors when issuing cache requests against the private caches;

a cache miss rate comparator configured to compare the cache miss rates; and

a cache request forwarder configured to allocate cache lines from a private cache of a first processor to a second processor based upon the difference between the cache miss rate for the first processor and the cache miss rates of other processors.

44. (New) The apparatus of claim 43, wherein the cache miss rate monitor comprises a plurality of counters, each configured to count cache misses of a corresponding one of the plurality of processors.

45. (New) The apparatus of claim 43, wherein the cache request forwarder is adaptable to forward cache requests from the second processor to the private cache associated with the first processor.

46. (New) The apparatus of claim 43, wherein the cache request forwarder is adapted to selectively allocate cache lines based upon a priority associated with cache request of the processors.

47. (New) The apparatus of claim 43, wherein the cache request forwarder comprises a least recently used cache line table to determine which cache line to allocate for use with the second processor.

48. (New) An apparatus adapted to reduce the latency for accessing memory coupled thereto, comprising:

more than one processors to issue cache requests;

more than one private caches, each individually coupled with one of the more than one processors, wherein the more than one processors and the more than one private caches are parts of a single processor module;

a cache miss rate monitor to determine a cache miss rate with each of the more than one processors;

a cache miss rate comparator to determine when at least one of the cache miss rates exceeds a threshold; and

a cache request forwarder to forward a cache request from a processor of the more than one processors that is associated with a cache miss rate determined to exceed the threshold, to a private cache of the more than one private caches associated with another processor of the more than one processors.

49. (New) The apparatus of claim 48, wherein the cache miss rate monitor comprises more than one cache miss counters, each coupled with one of the more than one processors, to start a count of cache misses after a cold start warm-up period.

50. (New) The apparatus of claim 48, wherein the cache miss comparator comprises a rate averager to compare the cache miss rates to determine when the cache miss rate of the processor exceeds an average cache miss rate associated with the more than one processors.

51. (New) The apparatus of claim 48, wherein the cache request forwarder is responsive to a software instruction to forward cache requests from one of the more than one processors to the private cache.

52. (New) The apparatus of claim 48, wherein the cache request forwarder is adapted to select the private cache based upon a least recently used cache line associated with the private caches.

53. (New) The apparatus of claim 52, wherein the cache request forwarder is adapted to select the private cache based upon a processor module on which the private cache resides.

54. (New) The apparatus of claim 47, wherein the cache request forwarder is adapted to select the cache request based upon a priority associated with the cache request.

55. (New) The apparatus of claim 47, wherein the cache request forwarder inserts the cache request into a cache request queue for the private cache to store the memory line in the private cache.

56. (New) The apparatus of claim 55, wherein the cache request forwarder comprises an arbitrator to arbitrate between the cache request and another cache request from another processor of the more than one processors, to forward the cache request to the cache request queue.

57. (New) A system, comprising:

a processor module comprising a first processor coupled with a first private cache and a second processor coupled with a second private cache;

a cache miss rate monitor to count cache misses associated with the first processor and the second processor;

a cache miss rate comparator to compare the cache misses associated with the first processor against cache misses associated with the second processor; and

a cache request forwarder to forward cache requests from the first processor to the second private cache when a number of cache misses associated with the first processor, related to the first private cache, exceeds a number of cache misses associated with the second processor.

58. (New) The system of claim 57, further comprising a historical use file containing a set of one or more tasks and associated cache miss rate information.

59. (New) The system of claim 58, further comprising a software application to enable the cache request forwarder to forward the cache requests based upon the difference between the number of cache misses associated with the first processor and the number of cache misses associated with the second processor.

60. (New) The system of claim 57, wherein the cache request forwarder allocates cache lines of the first private cache and the second private cache based upon the difference between the cache miss rates of the first processor and the second processor.

61. (New) The system of claim 57, wherein the cache request forwarder forwards cache requests from a first processor module of the more than one processor modules to a second processor module of the more than one processor modules, the second module having a least recently used cache line.

62. (New) A computer readable storage medium containing a program which, when executed, performs an operation, comprising:

determining cache miss rates of more than one processors when issuing cache requests against one or more private caches;

comparing the cache miss rates; and

allocating cache lines from more than one of the private caches to a processor of the more than one processors based upon a difference between the cache miss rate for the processor and the cache miss rates of other processors, wherein the more than one processors and the more than one private caches are parts of a single processor module.

63. (New) The computer readable storage medium of claim 62, wherein allocating cache lines comprises forwarding cache requests from the processor to a private cache of the private caches, wherein the private cache is associated with another processor.

64. (New) The computer readable storage medium of claim 62, wherein allocating cache lines comprises selectively allocating cache lines based upon a priority associated with a cache request of the processor.

65. (New) A computer readable storage medium containing a program which, when executed, performs an operation, comprising:

monitoring cache miss rates of more than one processors;

comparing the cache miss rates of the more than one processors to determine when a cache miss rate of a first processor associated with a first private cache exceeds a threshold cache miss rate for the more than one processors;

forwarding a cache request associated with the first processor to a second private cache in response to determining the cache miss rate exceeds the threshold cache miss rate;

replacing a cache line in the second private cache with a memory line received in response to the cache request; and

accessing the cache line in response to an instruction from the first processor, wherein the more than one processors, the first private cache, and the second private cache are parts of a single processor module.

66. (New) The computer readable storage medium of claim 65, wherein the threshold cache miss rate is based upon an average cache miss rate for the more than one processors.

67. (New) The computer readable storage medium of claim 65, wherein forwarding the cache request comprises selecting the second private cache based upon a least recently used cache line associated with the private caches.

68. (New) The computer readable storage medium of claim 67, wherein selecting the second private cache comprises selecting a least recently used cache line based upon a processor module on which the first processor resides.

69. (New) The computer readable storage medium of claim 65, wherein forwarding the cache request comprises selecting the cache request based upon a priority associated with the cache request after the cache request misses in the first private cache.

70. (New) The computer readable storage medium of claim 65, wherein forwarding the cache request is responsive to a software instruction that overrides a result of comparing the cache miss rates to forward the cache request to the second private cache.